

This invention relates to a high voltage resistance. The resistance comprises at least one organic substrate (21) and a flat conductor (22) with length L, width ℓ fixed to the organic substrate and with a given resistivity ρ and a thickness ε , the value R of the resistance being equal to $\rho L / \ell$ e, the values of the length L, width ℓ being defined such that the mass of the flat conductor (22) is sufficient to resist electrical arcing without exceeding a given temperature. This invention is particularly applicable for current limitation resistances in microwave progressive wave tube emitters, used for example in airborne radar systems.